

## CLAIMS

What is claimed is:

1. A method for modeling a technical system with a plurality of technical components, comprising the steps of:  
providing data elements of a plurality of models which have a pre-definable mutual relationship in equivalent, superior and/or inferior levels, and  
based on the mutual relationship, automatically associating a data element of a first model located at a superior level with another model on an equivalent or inferior level that has a pre-definable relationship with the first model, and vice versa.
2. The method of claim 1, wherein each data element is associated with a single model.
3. The method of claim 1, wherein the models are subdivided into parent models and application-specific models.
4. The method of claim 3, wherein starting with an application-specific model, a concrete relationship, in particular a functional relationship, is created and associated between one of the parent models and the application-specific model.

5. The method of claim 1, and further comprising the step of automatically creating at least one model of the technical system based on a plurality of component models and their relationships.
6. The method of claim 3, wherein a parent model of the technical system is generated based on a parent model of one or more components.
7. The method of claim 3, wherein an application-specific model of the technical system is generated based on an application-specific model of one or more components.

8. A device for automatically associating data elements when modeling of a technical system having a plurality of components based on models which are located at equivalent, superior and/or inferior levels and have a mutual relationship, comprising
- a first model-related memory for storing the models, and
- a second data-related memory for storing the data elements,
- wherein at least one relationship is associated with the models stored in the first model-related memory, based on which the corresponding data element that is stored in the second data-related memory is associated with a first model at a superior level, and
- wherein based on a pre-definable relationship the corresponding data element of the first model at the superior level is automatically associated with another model located at an equivalent or inferior level and having a relationship with the first model.
9. The device of claim 8, and further comprising at least one program code means for creating and storing the pre-definable relationship between at least two models.
10. The device of claim 8, and further comprising an additional program code means for referencing and storing the data element representing the pre-definable relationship.

11. The device of claim 8, wherein the first model-related memory is subdivided into a memory for parent models and a memory for application-specific models.